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EXAMINER	
SMITH, TYRONE W	
ART UNIT	**PAPER NUMBER**
2837	

DATE MAILED: 05/22/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/788,994	FEDERMAN ET AL.	
	Examiner	Art Unit	
	Tyrone W. Smith	2837	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *08 March 2006*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-9,11-25 and 27-34* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-9,11,13-17,19-25 and 27-34* is/are rejected.

7)☒ Claim(s) *12 and 18* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claims 1-5, 11, 19-23, 27-29 and 30 rejected under 35 U.S.C. 103(a) as being unpatentable over Inaba et al (4877388) in view of Sugiyama (JP60-102878).

Regarding Claims 1 and 19. Inaba discloses a converter stage (Figure 3 item 10) to convert an AC voltage to a DC voltage, the converter stage being configured to be electrically connectable to an AC power source (Figure 3 item E); a DC link stage (Figure 3 item C) to filter and store energy from the converter stage, the DC link stage being electrically connected to the converter stage; an inverter stage (Figure 3 items 11 and 11') comprising a plurality of inverters electrically connected in parallel to the DC link stage, each inverter of the plurality of inverters being configured to convert a DC voltage to an AC voltage to power a corresponding load, and the control circuit (Figure 3 item 12) controls each inverter of the plurality of inverters being configured to operate substantially independently of other inverters of the plurality of inverters. Refer to column 3 lines 1-68 and column 4 lines 1-34. However, Inaba does not disclose wire bonds sized or similar to disconnect the inverter from the DC link stage in the event a fault occurs in one of the inverter and the corresponding motor.

Sugiyama discloses a parallel redundancy synchronous operation type inverter that if a malfunction occurs in any of three inverters when the inverters are operated in parallel, the

selecting breakage switch (2) of the defective inverter is opened to disconnect the defective inverter. This is similar to the limitation of wire bonds sized (switches) to disconnect the inverter from the DC link stage in the event a fault occurs in one of the inverter and the corresponding motor.

It would have been obvious to one of ordinary skill in the art at the time of invention to use Inaba's invention with Sugiyama's a parallel redundancy synchronous operation type inverter. The advantage of combining the two would improve the reliability of an inverter by disconnecting only the inverter when a defect occurs in any of the inverters and switching to a standby inverter.

Regarding Claims 2-5 and 20-23. Inaba discloses a control circuit (Figure 3 item 12) to control operation of the converter and the inverter stage. Further, Inaba discloses that the control circuit provides one set of instructions to all the inverters to control operation of the inverter. Refer to column 3 lines 1-68 and column 4 lines 1-34.

Regarding Claims 11 and 27. Inaba discloses two inverters in Figure 3 items 11 and 11'. It should be noted that in In re Harza, 274 F.2d 669, 124 USPQ 378 (CCPA 1960) (Claims at issue were directed to a water-tight masonry structure wherein a water seal of flexible material fills the joints which form between adjacent pours of concrete. The claimed water seal has a "web" which lies ** in the joint, and a plurality of "ribs" ** >projecting outwardly from each side of the web into one of the adjacent concrete slabs. <The prior art disclosed a flexible water stop for preventing passage of water between masses of concrete in the shape of a plus sign (+). Although the reference did not disclose a plurality of ribs, the court held that mere duplication of parts has no patentable significance unless a new and unexpected result is produced.). In the current invention and in the Inaba reference added more inverters is the discretion of the inventor and would not add any new and unexpected result.

It would have been obvious to one of ordinary skill in the art at the time of invention to use Inaba's invention with Sugiyama's a parallel redundancy synchronous operation type inverter. The advantage of combining the two would improve the reliability of an inverter by disconnecting only the inverter when a defect occurs in any of the inverters and switching to a standby inverter.

Regarding Claim 28. Inaba discloses each inverter of the plurality of inverters comprises at least one integrated bipolar transistor power switch and at least one inverse diode (Figure 3 items 11 and 11').

It would have been obvious to one of ordinary skill in the art at the time of invention to use Inaba's invention with Sugiyama's a parallel redundancy synchronous operation type inverter. The advantage of combining the two would improve the reliability of an inverter by disconnecting only the inverter when a defect occurs in any of the inverters and switching to a standby inverter.

Regarding Claim 29. The DC link uses a capacitor (Figure 3 item C).

It would have been obvious to one of ordinary skill in the art at the time of invention to use Inaba's invention with Sugiyama's a parallel redundancy synchronous operation type inverter. The advantage of combining the two would improve the reliability of an inverter by disconnecting only the inverter when a defect occurs in any of the inverters and switching to a standby inverter.

Regarding Claim 30. Inaba discloses a DC bus comprises a positive rail and a negative rail; the converter section comprises at least one output connected to the positive rail of the DC bus and at least one output connected to the negative rail of the DC bus; and each inverter of the plurality of inverters comprises at least one input connected to the positive rail of the DC bus and at least one input connected to the negative rail of the DC bus (Figure 3).

It would have been obvious to one of ordinary skill in the art at the time of invention to use Inaba's invention with Sugiyama's a parallel redundancy synchronous operation type inverter. The advantage of combining the two would improve the reliability of an inverter by disconnecting only the inverter when a defect occurs in any of the inverters and switching to a standby inverter.

3. Claims 6 and 24 rejected under 35 U.S.C. 103(a) as being unpatentable over Inaba et al (4877388) in view of Sugiyama (JP60-102878) as applied to claims 1-6, 11-12, 19-24, 27-29 and 30 above, and further in view of Tokizaki et al (5528114).

Regarding Claims 6 and 24. Inaba discloses a converter stage (Figure 3 item 10) to convert an AC voltage to a DC voltage, the converter stage being configured to be electrically connectable to an AC power source (Figure 3 item E); a DC link stage (Figure 3 item C) to filter and store energy from the converter stage, the DC link stage being electrically connected to the converter stage; an inverter stage (Figure 3 items 11 and 11') comprising a plurality of inverters electrically connected in parallel to the DC link stage, each inverter of the plurality of inverters being configured to convert a DC voltage to an AC voltage to power a corresponding load, and the control circuit (Figure 3 item 12) controls each inverter of the plurality of inverters being configured to operate substantially independently of other inverters of the plurality of inverters. Refer to column 3 lines 1-68 and column 4 lines 1-34. However, Inaba does not disclose wire bonds sized or similar to disconnect the inverter from the DC link stage in the event a fault occurs in one of the inverter and the corresponding motor.

Sugiyama discloses a parallel redundancy synchronous operation type inverter that if a malfunction occurs in any of three inverters when the inverters are operated in parallel, the selecting breakage switch (2) of the defective inverter is opened to disconnect the defective

inverter. This is similar to the limitation of wire bonds sized (switches) to disconnect the inverter from the DC link stage in the event a fault occurs in one of the inverter and the corresponding motor. However, neither Inaba nor Sugiyama discloses a control system provides a difference set of control instructions to each inverter of the plurality of inverters to control. However, neither Inaba nor Sugiyama discloses the inverters receiving different control signal from a controller/control system.

Tokizaki disclose an apparatus for driving two motor which includes a plurality of inverters (Figure 4 items 128 and 155) for controlling a compressor motor (Figure 4 item 9) and a fan motor (Figure 4 item 19) wherein a microprocessor (Figure 4 item 111) send individual and different control signals (column 4 lines 47-67, column 5 lines 1-67, column 6 lines 1-57, column 13 lines 4-23) to the inverters for control of the motors. Further, refer to Figures 5, 6 and 10 wherein based on the configuration and control of the individual motors the inverters receive different control signals.

It would have been obvious to one of ordinary skill in the art at the time of invention to use Tokizaki's invention with Inaba and Sugiyama. The advantage of combining the two would provide the means to drive a plurality of motors and other electrical apparatus with plural sets of outputs based on a PWM system provided by the use of a signal microprocessor or similar controller.

4. Claims 7, 8 and 25 rejected under 35 U.S.C. 103(a) as being unpatentable over Inaba et al (4877388) in view of Sugiyama (JP60-102878) as applied to claims 1-5 11, , 19-23 27-29 and 30 above, and further in view of Kobayashi et al (GB2264204A).

Regarding Claims 7, 8 and 25. Inaba discloses a converter stage (Figure 3 item 10) to convert an AC voltage to a DC voltage, the converter stage being configured to be electrically

connectable to an AC power source (Figure 3 item E); a DC link stage (Figure 3 item C) to filter and store energy from the converter stage, the DC link stage being electrically connected to the converter stage; an inverter stage (Figure 3 items 11 and 11') comprising a plurality of inverters electrically connected in parallel to the DC link stage, each inverter of the plurality of inverters being configured to convert a DC voltage to an AC voltage to power a corresponding load, and the control circuit (Figure 3 item 12) controls each inverter of the plurality of inverters being configured to operate substantially independently of other inverters of the plurality of inverters. Refer to column 3 lines 1-68 and column 4 lines 1-34.

However, Inaba does not disclose wire bonds sized to disconnect the inverter from the DC link stage in the event a fault occurs in one of the inverter and the corresponding motor.

Sugiyama discloses a parallel redundancy synchronous operation type inverter that if a malfunction occurs in any of three inverters when the inverters are operated in parallel, the selecting breakage switch (2) of the defective inverter is opened to disconnect the defective inverter. This is similar to the limitation of wire bonds sized (switches) to disconnect the inverter from the DC link stage in the event a fault occurs in one of the inverter and the corresponding motor

However, neither Inaba nor Sugiyama disclose a converter stage configured in a rectifier arrangement having electronic switches that are switchable only to an on and/or off position.

Kobayashi discloses a converter stage configured in a rectifier arrangement (Figure 5 items 62a – 62d) having electronic switches that are switchable only to an on and/or off position.

It would have been obvious to one of ordinary skill in the art at the time of invention to use Inaba's invention and Sugiyama's method with Kobayashi's invention. The advantage of combining the two would provide a plurality of general-purpose motors, each coupled to a load apparatus, so as to drive the load more efficiently by means of a plurality of motors.

5. Claims 9 rejected under 35 U.S.C. 103(a) as being unpatentable over Inaba et al (4877388), Sugiyama (JP60-102878) and Kobayashi et al (GB2264204A) as applied to claims 7, 8 and 25 above, and further in view of Sood (5235504).

Regarding Claims 9 . Inaba discloses a converter stage (Figure 3 item 10) to convert an AC voltage to a DC voltage, the converter stage being configured to be electrically connectable to an AC power source (Figure 3 item E); a DC link stage (Figure 3 item C) to filter and store energy from the converter stage, the DC link stage being electrically connected to the converter stage; an inverter stage (Figure 3 items 11 and 11') comprising a plurality of inverters electrically connected in parallel to the DC link stage, each inverter of the plurality of inverters being configured to convert a DC voltage to an AC voltage to power a corresponding load, and the control circuit (Figure 3 item 12) controls each inverter of the plurality of inverters being configured to operate substantially independently of other inverters of the plurality of inverters. Refer to column 3 lines 1-68 and column 4 lines 1-34.

However, Inaba does not disclose wire bonds sized to disconnect the inverter from the DC link stage in the event a fault occurs in one of the inverter and the corresponding motor.

Sugiyama discloses a parallel redundancy synchronous operation type inverter that if a malfunction occurs in any of three inverters when the inverters are operated in parallel, the selecting breakage switch (2) of the defective inverter is opened to disconnect the defective inverter. This is similar to the limitation of wire bonds sized (switches) to disconnect the inverter from the DC link stage in the event a fault occurs in one of the inverter and the corresponding motor

However, neither Inaba nor Sugiyama disclose a converter stage configured in a rectifier arrangement having electronic switches that are switchable only to an on and/or off position.

Kobayashi discloses a converter stage configured in a rectifier arrangement (Figure 5 items 62a – 62d) having electronic switches that are switchable only to an on and/or off position.

However, the inventions above do not disclose a converter arrangement has a configuration selected from the group consisting of boost conversion, buck conversion and boost/buck conversion.

Sood discloses a converter arrangement has a configuration selected from the group consisting of boost conversion, buck conversion and boost/buck conversion. Refer to the abstract; Figure 4A items 62 and 70.

It would have been obvious to one of ordinary skill in the art at the time of invention to applied Sood's invention with invention described above. The combination of the two would provide a buck-boost type converter to give high conduction angle and output voltage control.

6. Claims 13-18 rejected under 35 U.S.C. 103(a) as being unpatentable over Inaba et al (4877388) in view of Beaverson et al (5894736) and Sugiyama (JP60-102878).

Regarding Claims 13 and 14. Inaba discloses a converter stage (Figure 3 item 10) to convert an AC voltage to a DC voltage, the converter stage being configured to be electrically connectable to an AC power source (Figure 3 item E); a DC link stage (Figure 3 item C) to filter and store energy from the converter stage, the DC link stage being electrically connected to the converter stage; an inverter stage (Figure 3 items 11 and 11') comprising a plurality of inverters electrically connected in parallel to the DC link stage, each inverter of the plurality of inverters being configured to convert a DC voltage to an AC voltage to power a corresponding load, and the control circuit (Figure 3 item 12) controls each inverter of the plurality of inverters being configured to operate substantially independently of other inverters of the plurality of inverters. Refer to column 3 lines 1-68 and column 4 lines 1-34.

However Inaba does not disclose a refrigerant circuit, the refrigerant circuit comprising a first compressor driven by a motor, a condenser arrangement and a evaporator arrangement connected in a closed refrigerant loop.

Beaverson discloses a method and apparatus for defecting surge in centrifugal compressors which includes a refrigerant circuit (Figure 1) comprising a compressor (Figure 1 item 12) driven by a motor (Figure 1 item 20), a condenser arrangement (Figure 1 item 14) and a evaporator arrangement (Figure 1 item 18) connected in a closed refrigerant loop.

Applicant should refer to M.P.E.P. 2144.04[R-1] Section VI under duplication of parts where in In re Harza, 274 F.2d 669, 124 USPQ 378 (CCPA 1960) (Claims at issue were directed to a water-tight masonry structure wherein a water seal of flexible material fills the joints which form between adjacent pours of concrete. The claimed water seal has a "web" which lies ** in the joint, and a plurality of "ribs" ** >projecting outwardly from each side of the web into one of the adjacent concrete slabs. <The prior art disclosed a flexible water stop for preventing passage of water between masses of concrete in the shape of a plus sign (+). Although the reference did not disclose a plurality of ribs, the court held that mere duplication of parts has no patentable significance unless a new and unexpected result is produced.). In this case, the refrigerant circuit is duplicated to meet the needs of the inventor and invention. The duplication of parts has no patentable significance unless a new and unexpected result is produced in the case.

However, neither Inaba nor Beaverson discloses wire bonds sized to disconnect the inverter from the DC link stage in the event a fault occurs in one of the inverter and the corresponding motor.

It would have been obvious to one of ordinary skill in the art at the time of invention to use Inaba's invention and Beaverson's invention with Sugiyama's a parallel redundancy

synchronous operation type inverter. The advantage of combining the two would improve the reliability of an inverter by disconnecting only the inverter when a defect occurs in any of the inverters and switching to a standby inverter.

Regarding Claim 15. Inaba discloses a control circuit (Figure 3 item 12) to control operation of the converter and the inverter stage. Further, Inaba discloses that the control circuit provides one set of instructions to all the inverters to control operation of the inverter. Refer to column 3 lines 1-68 and column 4 lines 1-34.

It would have been obvious to one of ordinary skill in the art at the time of invention to use Inaba's invention and Beaverson's invention with Sugiyama's a parallel redundancy synchronous operation type inverter. The advantage of combining the two would improve the reliability of an inverter by disconnecting only the inverter when a defect occurs in any of the inverters and switching to a standby inverter.

Regarding Claims 16 and 17. Beaverson discloses a method and apparatus for defecting surge in centrifugal compressors which includes a refrigerant circuit (Figure 1) comprising a compressor (Figure 1 item 12) driven by a motor (Figure 1 item 20), a condenser arrangement (Figure 1 item 14) and a evaporator arrangement (Figure 1 item 18) connected in a closed refrigerant loop.

It would have been obvious to one of ordinary skill in the art at the time of invention to use Inaba's invention and Beaverson's invention with Sugiyama's a parallel redundancy synchronous operation type inverter. The advantage of combining the two would improve the reliability of an inverter by disconnecting only the inverter when a defect occurs in any of the inverters and switching to a standby inverter.

7. Claims 31 and 32 rejected under 35 U.S.C. 103(a) as being unpatentable over Inaba et al (4877388) and Sugiyama (JP60-102878) as applied to claims 1-5, 11- , 19-23, 27-29 and 30 above, and further in view of Rose (2442021).

Inaba discloses a converter stage (Figure 3 item 10) to convert an AC voltage to a DC voltage, the converter stage being configured to be electrically connectable to an AC power source (Figure 3 item E); a DC link stage (Figure 3 item C) to filter and store energy from the converter stage, the DC link stage being electrically connected to the converter stage; an inverter stage (Figure 3 items 11 and 11') comprising a plurality of inverters electrically connected in parallel to the DC link stage, each inverter of the plurality of inverters being configured to convert a DC voltage to an AC voltage to power a corresponding load, and the control circuit (Figure 3 item 12) controls each inverter of the plurality of inverters being configured to operate substantially independently of other inverters of the plurality of inverters. Refer to column 3 lines 1-68 and column 4 lines 1-34.

However, Inaba does not disclose wire bonds sized to disconnect the inverter from the DC link stage in the event a fault occurs in one of the inverter and the corresponding motor.

Sugiyama discloses a parallel redundancy synchronous operation type inverter that if a malfunction occurs in any of three inverters when the inverters are operated in parallel, the selecting breakage switch (2) of the defective inverter is opened to disconnect the defective inverter. This is similar to the limitation of wire bonds sized (switches) to disconnect the inverter from the DC link stage in the event a fault occurs in one of the inverter and the corresponding motor

However, neither Inaba nor Sugiyama disclose a circuit breaker or similar electrically connected in series between the AC power source and the converter section and an

autotransformer electrically connected in series between the AC power source and the converter section to convert an AC voltage from the AC power source to a desired AC voltage.

Rose discloses a sectionalized variable speed drive, which includes a circuit breaker or similar (Figure 1 item 52) electrically connected in series between the AC power source and the converter section (Figure 1 items 3a-3c) and an autotransformer electrically (Figure 1 item 11) connected in series between the AC power source and the converter section to convert an AC voltage from the AC power source to a desired AC voltage.

It would have been obvious to one of ordinary skill in the art at the time of invention to use Inaba's invention and Sugiyama's invention with Rose's a sectionalized variable speed drive. The advantage of combining the two would provide capability of controlling the AC voltage going to the inverter and motor thus providing a non-overload situation.

8. Claims 33 and 34 rejected under 35 U.S.C. 103(a) as being unpatentable over Inaba et al (4877388) and Sugiyama (JP60-102878) as applied to claims 1-5, 11 , 19-23, 27-29 and 30 above, and further in view of Kumar (5896021).

Inaba discloses a converter stage (Figure 3 item 10) to convert an AC voltage to a DC voltage, the converter stage being configured to be electrically connectable to an AC power source (Figure 3 item E); a DC link stage (Figure 3 item C) to filter and store energy from the converter stage, the DC link stage being electrically connected to the converter stage; an inverter stage (Figure 3 items 11 and 11') comprising a plurality of inverters electrically connected in parallel to the DC link stage, each inverter of the plurality of inverters being configured to convert a DC voltage to an AC voltage to power a corresponding load, and the control circuit (Figure 3 item 12) controls each inverter of the plurality of inverters being

configured to operate substantially independently of other inverters of the plurality of inverters. Refer to column 3 lines 1-68 and column 4 lines 1-34.

However, Inaba does not disclose wire bonds sized to disconnect the inverter from the DC link stage in the event a fault occurs in one of the inverter and the corresponding motor.

Sugiyama discloses a parallel redundancy synchronous operation type inverter that if a malfunction occurs in any of three inverters when the inverters are operated in parallel, the selecting breakage switch (2) of the defective inverter is opened to disconnect the defective inverter. This is similar to the limitation of wire bonds sized (switches) to disconnect the inverter from the DC link stage in the event a fault occurs in one of the inverter and the corresponding motor

However, neither Inaba nor Sugiyama disclose a circuit breaker or similar electrically connected in series between the AC power source and the converter section, an autotransformer electrically connected in series between the AC power source and the converter section to convert an AC voltage from the AC power source to a desired AC voltage, at least one fuse and at least one inductor electrically connected in series between the AC power source and the converter section.

Kumar discloses a circuit breaker (Figure 1 item 128) or similar electrically connected in series between the AC power source and the converter section, an autotransformer (Figure 1 item 120) electrically connected in series between the AC power source and the converter section to convert an AC voltage from the AC power source to a desired AC voltage, at least one fuse (Figure 1 item 126) and at least one inductor (Figure 1 items 130 and 132) electrically connected in series between the AC power source and the converter section.

It would have been obvious to one of ordinary skill in the art at the time of invention to use Inaba's invention and Sugiyama's invention along with Kumar's invention. The advantage of

combining the two would provide an invention that prevents leakage current in motor, which result from freezing and thawing cycles.

Allowable Subject Matter

9. Claims 12 and 18 objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Response to Arguments

10. Applicant's arguments filed March 8, 2006 have been fully considered but they are not persuasive.

Applicant argues that the reference of Inaba does not disclose a plurality of inverters receiving a separate and independent control signal. Further, Applicant argues that the reference of Sugiyama does not disclose wire bonds sized to disconnect the inverter from the DC link stage in the event a fault occurs in one of the inverter and the corresponding motor.

Examiner basis rejection on the claims as presented where plurality of inverters receiving a separate and independent control signal. In Inaba, the control circuit (Figure 3 item 12) controls each inverter of the plurality of inverters being configured to operate substantially independently of other inverters of the plurality of inverters; the control signal sent from the control circuit provide one control signal however, that control signal is separate for independent control of the inverters. Further, in claims 4 and 22 describes a common set of control instructions to each inverter. Refer to column 3 lines 1-68 and column 4 lines 1-34. In re Stevens, 212 F.2d 197, 101 USPQ 284 (CCPA 1954) (Claims were directed to a handle for a fishing rod wherein the handle has a longitudinally adjustable finger hook, and the hand grip of

the handle connects with the body portion by means of a universal joint. The court held that adjustability, where needed, is not a patentable advance, and because there was an art-recognized need for adjustment in a fishing rod, the substitution of a universal joint for the single pivot of the prior art would have been obvious.). In this case, the signals send to each inverter can be different based on an adjustment by the inventor or operator, which would not be a new and different discovery. Further, it would appear that based on the drawings and description the controller is sending a signal to each inverter.

Examiner believes, based on the claims as presented, that Sugiyama teaches the invention of wire bonds sized to disconnect the inverter from the DC link stage in the event a fault occurs in one of the inverter and the corresponding motor. By definition wire bonds have meanings that do not relate to the current invention. In the computer industry wire bonds means use of tiny wires that are soldered to the bare die on one end and to metal leads of the chip package on the other. Before the advent of flip chips and solder ball techniques, wire bonding was the traditional interconnection method to and from the chip. Further, wire bonds or wire bonding could mean connecting a electrical system together therefore, the term is broad. The Applicant on page 13 states that the wire bonds are an electrical break or disconnect which is similar to a fuse. Examiner does not see the relationship or similar meaning between a wire bond and a fuse. Sugiyama discloses a system that if a malfunction occurs in any of three inverters when the inverters are operated in parallel, the selecting (electrical) breakage switch (2) of the defective inverter is opened to disconnect the defective inverter. It should be noted that Kumar, described above, discloses a fuse.

Based on the main points of emphasis, Examiner believes that the rejection is maintained. Applicant's representative should contact Examiner if there are any issues or problems.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tyrone W. Smith whose telephone number is 571-272-2075. The examiner can normally be reached on weekdays from 8:30am to 5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Paula Bradley, can be reached on 571-272-2800 ext. 33. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Tyrone Smith
Patent Examiner

Art Unit 2837

RINA DUDA
PRIMARY EXAMINER